Case study: Offshore wind in the North Sea

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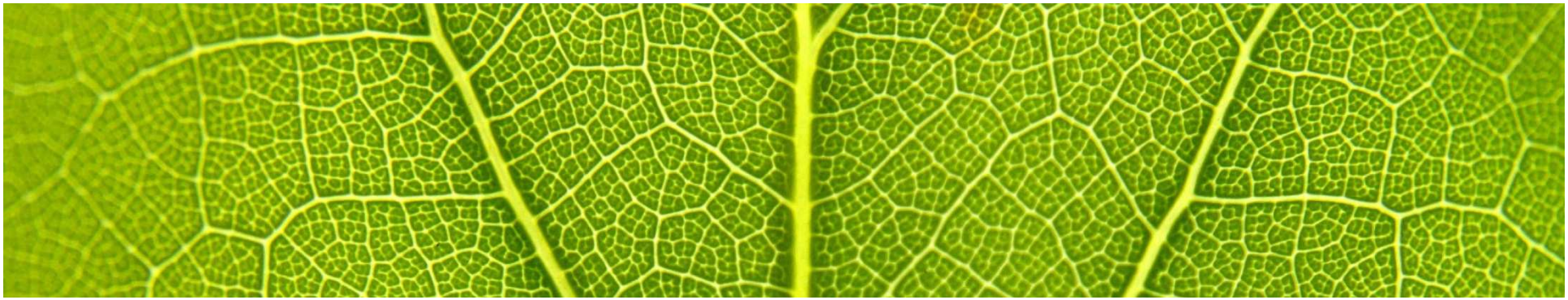


MEMBER STATE COOPERATION ON RENEWABLE ENERGY

Member State meeting
5 November 2014, Brussels

Case study: Offshore wind in the North Sea

Lena Kitzing, Henrik Klinge Jacobsen
5/11/2014

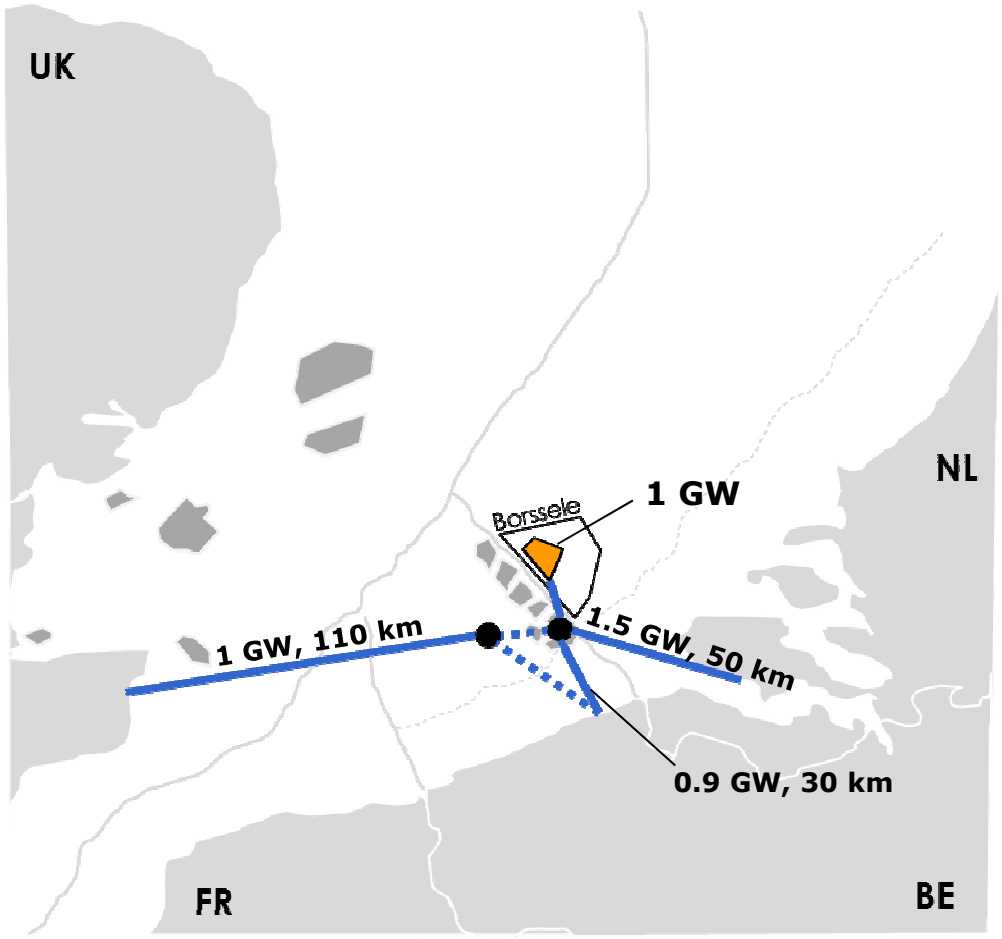
Content

- General introduction to the case study on renewables cooperation
  - Belgium is main driver and Netherlands host
  - How to share costs and benefits between BE, NL and UK
  - Support financing, compensation and market access

- Design characteristics
  - Support guaranty and contract setup
  - Involvement of NL and UK predetermined by optional participation in the 1000 MW offshore capacity

- Conclusions
  - What did we learn from the case study?
  - Further development of cooperation

Set-up of the joint project in the North Sea



Why a joint project here?

- **Site most attractive when benefits for several countries are exploited**

> Technical set-up aligned with the case study by NorthSeaGrid project (www.northseagrid.info)

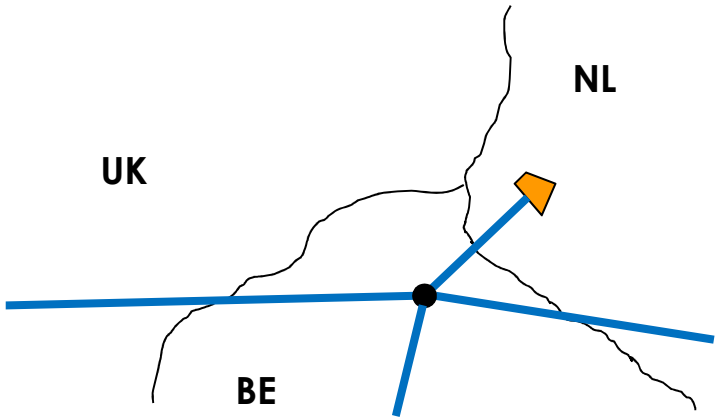
> Joint project wind park of 1000 MW, located in NL, the Borssele area

> Offshore hub in BE, connecting the wind park to BE

> Interconnectors to UK and NL

Set-up of the joint project in the North Sea

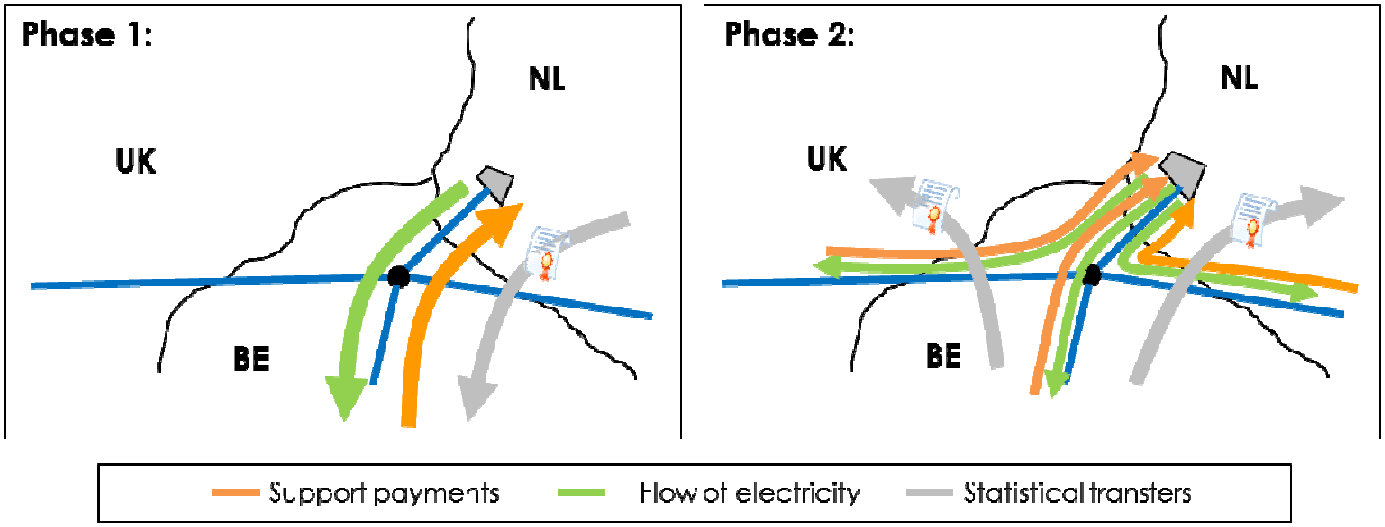
Simplified illustration



- Belgium is the driving force
- The Netherlands would have to make the site available. There is a natural reluctance, as the site might be needed for own future developments.
- The UK is interested if electricity can be generated at a competitive price as compared to domestic sources.
- Other, not physically connected countries, could be interested to participate based on statistical transfers.

Principles of the case study

- Maximum level of integration into existing system and regulations – only this can ensure a success in such short time frame (before 2020)
- Limited level of required coordination between countries (no joint funds etc.)
- Thus, each country will consider part of the wind park as just another RES installation within their territory



Sharing costs and benefits

	BE	NL	UK	LUX
Shares of RES				
Electricity from the wind park	*40%*	*30%*	*30%*	-
RES benefits for targets	*30%*	*30%*	*30%*	*10%*
Direct Effect				
Support cost to wind park	*40%*	*30%*	*30%*	-
Payment from statistical transfers	*-10%*			*10%*
Infrastructure cost	*40%*	*20%*	*40%*	-
Indirect Side Effects				
System integration costs Grid related costs Ancillary service costs Impact on conv. capacity	*40%*	*30%*	*30%*	-
Displaced alternative utilisation of area		*100%*		
Biodiversity and landscape costs	-	*100%*	-	-
Avoided local air pollution	*40%*	*30%*	*30%*	-
Greenhouse gas savings	*40%*	*30%*	*30%*	-
Security of supply	*40%*	*30%*	*30%*	-
Employment effects	*Allocation uncertain, depending on contracts*			
Innovation effects	*Allocation uncertain*			

Practical arrangements

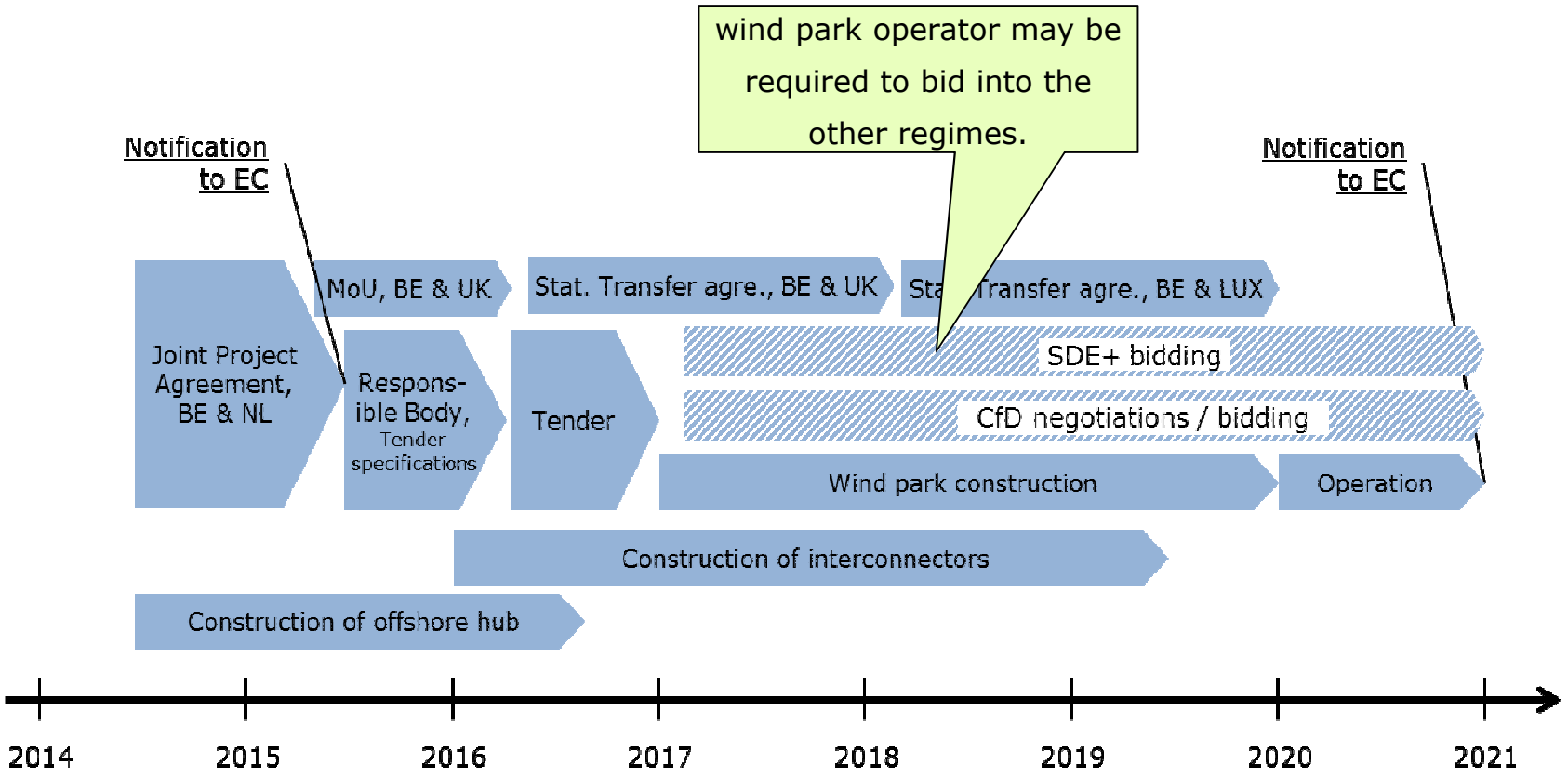
1. Agreement for a Joint Project between Belgium and the Netherlands including statistical transfer to Belgium

2. Agreement for a statistical transfer between Belgium and the UK

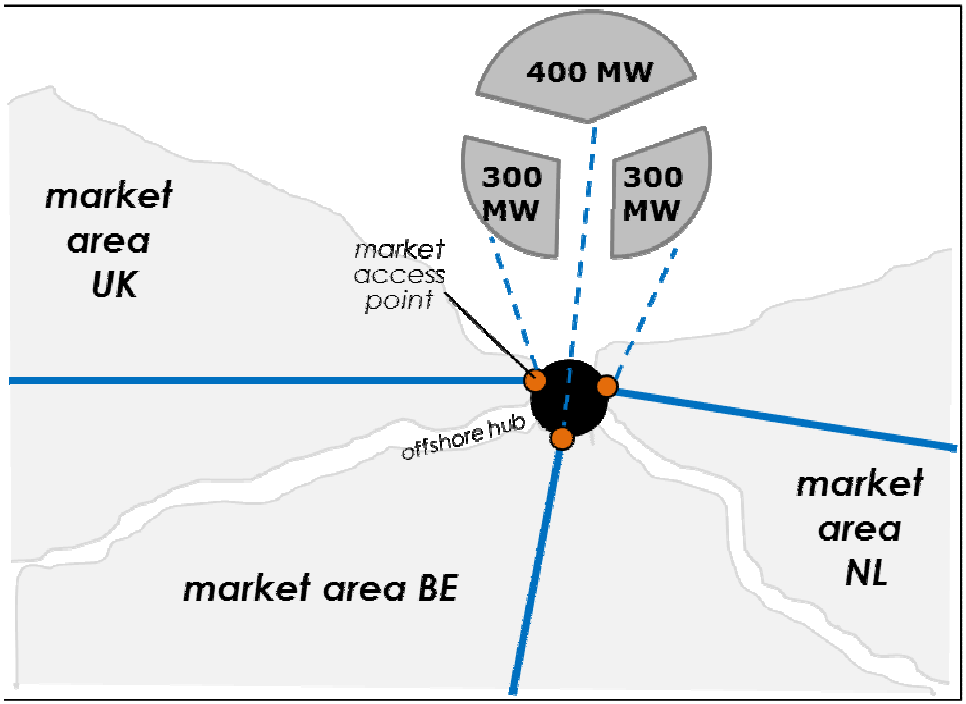
3. Agreement for a statistical transfer between Belgium and Luxemburg

Responsibilities of Belgium	Responsibilities of the Netherlands	Responsibilities of both
Provision of financial support to the project operator. Grid access for project, off-taking of all electricity, when-ever technically possible. In case of non-compliance, Belgium will lose all rights under the agreement and the area will again be at disposal for the Netherlands.	Transfer of RES benefits to Belgium. In case of non-compliance, either a financial compensation or a statistical transfer of alternative RES benefits is possible.	Permitting and licensing (through 'Responsible Body')

Potential timing & process



Special Issue: Market Access Phase II



- There currently exists no regulation regarding offshore hubs and to which market area and pricing zone they would belong
- Issue: UK currently requires physical import of the power. How else can production enter the UK in a simple way?
- Issue: Can you extend the market area to reach outside the countries' borders?

Conclusions

- The case study outlines possible design of the basic contractual characteristics necessary for the implementation of cooperation

> Simplicity of first stage development of the project is vital

> Belgium act as primary driver of cooperation project

> No changes in support schemes needed

> Option for Netherlands to take 300MW serve as part of compensation for land use (forgone development)

> Physical feed-in for each market must be accepted at hub point if phase II participation of NL and UK

Please contact us for more information

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